

**REMARKS**

**Summary of the Office Action**

Claims 1, 3-9, 11-16, 18-22, 24, 26, 27, 29, and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Inoue et al.* (U.S. 2003/0067579).

Claims 2, 10, 17, and 25 stand rejected under 35 U.S.C. § 103(a) as being anticipated by *Inoue et al.* in view of APA.

Claims 23 and 28 stand rejected under 35 U.S.C. § 103(a) as being anticipated by *Inoue et al.* in view of *Youn* (US 2002/0089485).

Claim 14 stands rejected under 35 U.S.C. § 112, second paragraph, as lacking antecedent basis.

Claims 1-30 stand rejected on the ground of nonstatutory double patenting over *Baek et al.* (Application No. 10/608,187)

The Specification is objected to due to minor informalities.

**Summary of the Response to the Office Action**

Applicant has amended claims 14 and 22 to further define the invention. Accordingly, claims 1-30 are pending for consideration.

**The Rejection Under Double Patenting**

Claims 1-30 stand rejected on the ground of nonstatutory double patenting over *Baek et al.* (Application No. 10/608,187). Applicant respectfully disagrees.

With respect to claims 1-30, Applicant respectfully asserts that the TFT configuration of the present application is completely different from the TFT configuration of *Baek et al.* For example, in contrast to FIG. 10 and the recitation in claim 22 of the present application, FIG. 10

and the recitation in claim 13 of *Baek et al.* discloses and claims “opposite polarity voltages being supplied to the adjacent data lines,” (emphasis added).

With respect to independent claim 22, as amended, Applicant respectfully asserts that *Baek et al.* is completely silent as to a “data driver for supplying a second voltage, by using leakage current of the thin film transistor generated due to the first voltage, for electric field alignment to the data lines during electric field alignment of the liquid crystal cell,” (emphasis added), as required by independent claim 22, as amended.

With respect to claims 1-21 and 23-30, Applicant respectfully asserts that the Office Action has failed to point out the subject matter claimed in the present application which is allegedly covered by *Baek et al.* Accordingly, Applicant respectfully asserts that any subsequent Office Action should maintain claims 1-21 and 23-30 as being allowed or be a non-final Office Action.

#### **The Rejection Under 35 U.S.C. § 112**

Claim 14 stand rejected under 35 U.S.C. § 112, second paragraph, as lacking antecedent basis. Accordingly, Applicant amends “the voltage” to “voltages.” Thus, Applicant respectfully asserts that claim 14, as amended, complies with the requirement of 35 U.S.C. § 112, and respectfully requests that the rejection be withdrawn.

**All Claims Define Allowable Subject Matter**

Claims 1, 3-9, 11-16, 18-22, 24, 26, 27, 29, and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Inoue et al.* (U.S. 2003/0067579), claims 2, 10, 17, and 25 stand rejected under 35 U.S.C. § 103(a) as being anticipated by *Inoue et al.* in view of APA, claims 23 and 28 stand rejected under 35 U.S.C. § 103(a) as being anticipated by *Inoue et al.* in view of *Youn* (US 2002/0089485). Applicant respectfully traverses the rejection for at least the following reasons.

With regard to the independent claim 1, as amended, Applicant respectfully asserts that *Inoue et al.* fails to teach or suggest a combination supplying “a second voltage for electric field alignment of the ferroelectric liquid crystal to the liquid crystal cell by using leakage current of the thin film transistor generated due to the first voltage,” (emphasis added). The Examiner admits that *Inoue et al.* fails to explicitly teach that leakage current is generated due to the first voltage and that this leakage current is what causes the alignment. However, the Office Action alleges that the claimed feature is obvious because *Inoue et al.* discloses a method wherein the gate bus line voltage is floating and another method wherein the 5V is applied to the data bus line in paragraphs [0175] and [0180]. Applicant respectfully asserts that the Office Action fails to establish a *prima facie* case of obviousness with regard to the features recited by independent claim 1 for at least the following reasons.

In contrast to the Applicant’s claimed invention, *Inoue et al.* discloses two distinct methods for repairing defects in the liquid crystal panel. The first method is to apply a voltage between the two common electrodes. In the first method, the gate bus line voltage is floating (paragraph [0178] of *Inoue et al.*) and no voltage is applied to the data line. (paragraph [0175] of

*Inoue et al.*) The second method is radiate light onto the liquid crystals. (paragraphs [0179], [0180] of *Inoue et al.*) In the second method, the gate bus line voltage is silent as to whether it is floating. In fact, the gate bus line, Cs bus line, and the data bus line are all maintained at a same voltage, i.e., 5V. (paragraph [0180] of *Inoue et al.*) Furthermore, *Inoue et al.* emphasizes, in paragraph [0180], that the second method is intended to be achieved only during exposure to light. Accordingly, Applicant respectfully asserts that the mechanism disclosed in *Inoue et al.* is completely silent as to applying a second voltage for electric field alignment of the ferroelectric liquid crystal using leakage current of the thin film transistor generated due to the first voltage, as required by independent claim 1.

As pointed out in MPEP 2144.03B, “[t]he Examiner must provide specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion of common knowledge. See *Soli*, 317 F.2d at 946, 37 USPQ at 801.” In addition, as required by MPEP 2144.03C, “[i]f applicant adequately traverses the examiner’s assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. See 37 CFR 1.104(c)(2).” Thus, Applicants respectfully request documentary evidence that applying a second voltage for electric field alignment of the ferroelectric liquid crystal using leakage current of the thin film transistor generated due to the first voltage, is common knowledge or well known in the art if the rejection of at least claim 1 under 35 U.S.C. § 103(a) in view of *Inoue et al.* is to be maintained. Accordingly, Applicant respectfully asserts that the combination of features recited by claim 1 are allowable, and hence independent claims 7, 16, and 22, as amended, are allowable for similar reasons.

For the above reasons, Applicant respectfully asserts that the rejections under 35 U.S.C. §

103(a) should be withdrawn because none of the applied prior art references, whether taken singly or combination, fails to teach or suggest the novel combination of features recited by at least independent claims 1, 7, 16, and 22, and hence dependent claims 2-6, 8-15, 17-21, and 23-30.

**Conclusion**

In view of the foregoing, Applicant respectfully requests reconsideration and the timely allowance of all pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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